

## **Morphological features analysis in pathogenic dengue infection as an alternative screening method**

### **ABSTRACT**

Dengue is one of the most widespread mosquito-borne infections in Malaysia. The diagnosis still remains a challenge in area of disease confirmation where it could not be easily differentiated with other febrile illnesses even though the diagnosis of classical dengue fever and dengue haemorrhagic fever can be recognized clinically. The clinical diagnosis also can be difficult where the signs and symptoms presented are easily confused with malaria, leptospirosis and typhoid fever. Therefore, an early and effective evaluation of the peripheral blood can be very helpful in patient management. The objectives of this study are to determine the morphological features in peripheral blood film (PBF) of pathogenic dengue infection. 30 PBF of positive dengue infection in University Malaya Medical centre (UMMC) had been examined in this study where atypical lymphocytes [n=27, (90%)] and thrombocytopenia [n=22, (73.3%)] were consistently found. Presence of thrombocytopenia and presence of atypical lymphocytes in PBF are important diagnostic clues for early diagnosis of dengue infection which could be potentially useful parameter in screening dengue. Therefore, PBF can have a significant function in supporting the diagnosis of dengue which can act as complement to the full blood count and serological diagnosis of dengue especially in cases where the clinical manifestation are abnormal.

**Keyword:** Dengue; Peripheral blood film; Atypical lymphocyte; Thrombocytopenia